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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/578,224

05/04/2006

Masafumi Yamakawa

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SUGHRUE MION, PLLC
2100 PENNSYLVANIA AVENUE, N.W.
SUITE 800
WASHINGTON, DC 20037

EXAMINER

PAIK, SANG YEOP

ART UNIT

PAPER NUMBER

3742

MAIL DATE

DELIVERY MODE

04/30/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/578,224	Applicant(s) YAMAKAWA, MASAFUMI	
	Examiner Sang Y. Paik	Art Unit 3742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 January 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Deevi et al (US 5,498,855).

Deevi shows the ceramic heater claimed including a heater and electrodes made of a material/binder essentially consisting of silicon carbide. Deevi shows that the tip end portions of the heater are used as terminals/electrodes for passing electricity thereto to elevate the temperature of the heater.

It is also noted the method recited in claim 6 renders the claim as a product by process wherein the patentability of the product depends on the structure and not by the process by which the product is made (also see MPEP 2113). Deevi, however, also shows the integrally formed ceramic heater that is made by the sintering process.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kano et al (US 6,384,383) or Murakami (US 5,462,603) in view of Deevi et al (US 5,498,855).

Kano or Murakami shows a ceramic heater having a susceptor placed on the working face of the ceramic heater and a reflecting plate provided below the ceramic heater. Kano further shows that the reflecting plate is made of silicon carbide, and Marakami further shows an insulating plate interposed between the ceramic heater and the reflecting plate wherein the heater and the insulating and reflecting plates are housed in a case. But neither Kano nor Murakimi shows that the ceramic heater with a heater and electrodes essentially consist of silicon carbide.

Deevi shows that it is known in the art to make a ceramic heater having a heater and electrodes made of silicon carbide which is known to provide a high heating temperature.

In view of Deevi, it would have been obvious to one of ordinary skill in the art to adapt Kano or Murakami with the ceramic heater having the heater made of silicon carbide which is known to provide a high heating temperature and the electrode also made of the silicon carbide to ensure that the thermal expansion and contraction with the heater can be suitably maintained.

Response to Arguments

5. Applicant's arguments filed 1/17/08 have been fully considered but they are not persuasive.

The applicant argues Deevi does not show the heater, the electrodes and the binder all made essentially consisting of the same material such as silicon carbide. It is noted that the transitional phrase "essentially consisting of" limits the claim scope within its recited elements or step along with those elements do not materially affect the basic and novel features. Deevi shows the heater elements (22) along with its electrode portion (21) made of silicon carbide in the

amount of 80 vol. % of the total percent. Such percentage of silicon carbide makes up the basic structure of the heater device with other variously disclosed elements including the binder that is also made of whiskers of SiC are provided to improve the electrical conductivity of the heater device but without affecting the disclosed basic material of the silicon carbide heater device.

Also see column 4, lines 4-17.

The applicant also argues Deevi does not show the electrodes but Deevi clearly discloses that the hub (21) and the tips of the heater elements (22) act as the electrical terminals (see column 9, lines 6-23), and this teaching clearly meets the recited heater and electrodes that are integrally constructed and joined with the binder.

The applicant's argument regarding the 103 rejection based on Deevi is also deemed unpersuasive as stated above. The applicant's unexpectedly superior results is not deemed persuasive since Deevi also shows that its heater displays a high rapid heating temperature and is sufficiently strong without threat of breakage during manufacture, and that its heater is also a thermally stable heater.

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sang Y. Paik whose telephone number is 571-272-4783. The examiner can normally be reached on M-F (6:30-3:30) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tu Hoang can be reached on 571-272-4780. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Sang Y Paik/

Primary Examiner, Art Unit 3742

Sang Y Paik

Primary Examiner

Art Unit 3742

syp